

REMARKS

By this Preliminary Amendment the specification has been corrected, claim 20 has been amended to include the feature of claim 4, claim 2 has been corrected, claims 4 and 21-25 canceled, and new claim 26 added. Entry is requested.

With respect to the examiner's rejection of claim 4 under 35 U.S.C. § 103 as being unpatentable over JP 9-57,401 and JP 63-203,256, the applicants' assert that this rejection is not proper. The object of the present invention is to provide a device for continuous or semi-continuous casting of metals with an electromagnetic brake being easy to apply to moulds of different sizes in a cost-efficient way. This is obtained by providing a device according to amended claim 20 of the present application. Accordingly, the combination of the following features is essential:

- The magnetic cores are permanently attached to the mould.
- The magnetic cores cover substantially an entire width of the mould, except for a center portion of the mould.
- The magnetic cores are arranged on a long side of the mould substantially perpendicularly to the casting direction in the mould.
- The yoke carries at least one coil and is detachably connected to the two magnetic cores.

By permanently attaching the magnetic cores to the mould so that they cover substantially the entire width of the mould, the same yoke with coil, accordingly a so-called standard brake, may be used for devices applied to moulds with varying width. Thus, such a device will be very cost efficient, since no special adaption of the yoke with coil has to be

done for moulds having different widths, but commercially available yokes with coil may be used for varying applications.

The devices according to JP'401 and JP'256 are designed for solving total different problems. The device according to JP'401 has a yoke extending substantially in parallel with the casting direction, so that the magnetic flux lines will be longitudinal instead of transversal, and for example an exchange of the magnetic cores 6a, 6b by longer or shorter ones would there only mean that the magnetic brake will there extend longer in the very casting direction, and any adaption thereof to another mould size would not be obtained. It would not be enough to only turn this device by 90° for arriving to the present invention, but other features has also to be added for obtaining the possibility of using commercially available yokes with coils independently of the width of the respective mould. This device with the brake acting on two levels is designed so as to facilitate maintenance thereof, which is a totally different purpose than the purpose of the present invention.

JP'256 shows a device in which the magnetic cores are not permanently attached to the mould, but they are connected by bolts 9 to the mould and by that detachable. Furthermore in this device there is no yoke having a coil, but coils are provided on the magnetic cores. The only similarity between this device and the vice of the present invention is that the yoke extends substantially perpendicularly to the casting direction, but the magnetic cores do not cover substantially the entire width of the mould, which is essential for the present invention. Accordingly no

commercially available electromagnetic brakes (yoke with coil) may be used for mould having varying widths through this device.

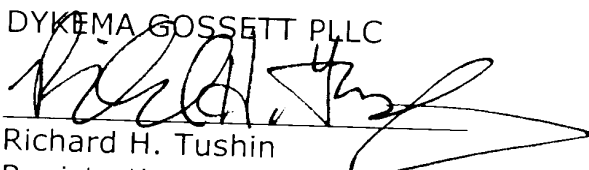
Accordingly, the devices according to the citations are occupied with solving quite different problems than the problem to be solved by the present invention, so that it may not be considered to be obvious to a person with ordinary skill in the art to use features of these devices already known and combine them in order to arrive to the present invention.

Favorable review is requested.

Respectfully submitted,

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